

AUGUST 8.

Dr. CARSON, Vice-President, in the chair.

Fifteen members present.

Remarks on Fossil Vertebrates from Wyoming.—Prof. LEIDY remarked that the collections of fossils presented this evening, by Drs. J. Van A. Carter and Joseph K. Corson, were of unusual interest. They consist of remains mainly of turtles, with those of mammals and crocodiles, and were obtained from the tertiary deposits in the vicinity of Fort Bridger, Wyoming Territory.

The great abundance of remains of turtles, of many species and genera, of fresh-water and terrestrial habit, obtained in Wyoming, indicates this region to have swarmed with these animals during the earlier portion of the tertiary period. Crocodiles and lacertian reptiles were likewise numerous. The many mammalian remains found in association with the reptilian fossils mainly belong to tapiroid and carnivorous animals.

The Wyoming tertiary fauna presents a remarkable contrast with the later faunæ of the Mauvaises Terres of White River, Dakota, and of the Niobrara River, Nebraska. Among the large number of fossils from these two localities, rich in evidence of mammalian life, there occur the remains of a single species of turtle in each, and none of crocodiles or other reptiles.

Dr. Carter's collection, besides containing remains of *Trionyx guttatus*, *Emys Jeanesianus*, *E. Haydeni*, and *E. Stevensonianus*, and *Baena arenosa*, also adds two new turtles to the list. One of these is a species of *Emys* of the largest size, and exceeds any now living. The carapace has measured about two feet and a half in length, and the sternum about two feet. In honor of its discoverer, it may be named *Emys Carteri*.

The first and second vertebral plates of this species present an unusual, perhaps an anomalous, appearance. The first is 4 inches long, and clavate in shape, with the narrow part foremost. The second is $2\frac{1}{4}$ inches long, and presents the usual hexagonal form reversed. The third plate, a little longer, is quadrate, with convex sides. The first vertebral scute is vase-like in outline, $5\frac{1}{2}$ inches long, $2\frac{3}{4}$ inches wide in front, $4\frac{3}{4}$ inches near the middle, and $3\frac{1}{2}$ inches at the back border. The second scute, of the ordinary form, is 5 inches long, and 4 inches wide.

The second turtle belongs to the recently characterized genus *Baena*, but is considerably larger than its associated species which have been described. The shell in its complete condition has been upwards of a foot and a half in length, and is seven inches and a half high. The sternum is flat, and about fifteen inches long. Its pedicles ascend at an angle of about 45° , and are seven inches and a half broad. As in the living *Dermatemys*,

[November 21,

and the sea-turtles, they are covered with large scutes, four in number, as in *Baena arenosa*. The intermediate vertebral scutes, are longer than broad—the third being 4 inches long, and $3\frac{1}{2}$ inches wide. A peculiarity of the species is the undulating manner in which the costal scutes join the marginal scutes, and the sternal scutes one another. The species may be named *Baena undata*.

Dr. Carter's collection also contains some fragments of bones of a large mammal, which are so mutilated as to be hardly characteristic. A jaw fragment among them, with the retained fragments of the true molars, would appear to indicate a species of *Palæosyops* much larger than *P. paludosus*. In absence of other evidence, it might be viewed as a species of this genus, under the name of *P. major*. The true molars occupied a space of four and a half inches. The last molar measured an inch and seven-eighths fore and aft, and an inch transversely in front.

Dr. Carter had also sent some fossils to Prof. Leidy, among which were portions of jaws, with nearly full series of teeth of *Hyrachyus agrarius*. This animal is related to the Tapir, *Hyracodon*, and *Lophiodon*. The formula of its dentition is the same as in *Hyracodon*: 7 molars, 1 canine, and 3 incisors. The true molars are like those of *Lophiodon*, except that the last lower one has a bi-lobed instead of a triple-lobed crown. Apparently the same animal has been indicated by Prof. Marsh, under the name of *Lophiodon Bairdianus*. A fragment of a lower jaw containing the last premolar, and the first true molar, indicates a larger species of *Hyrachyus*, which may be named *H. eximius*. The crown of the last premolar is $7\frac{1}{4}$ lines antero-posteriorly, and $5\frac{1}{2}$ transversely. The true molar has measured about $8\frac{1}{2}$ lines fore and aft, and 6 lines transversely. The depth of the jaw fragment below the true molar is over an inch and a half.

Another fossil is a mutilated incisor, indicating a species of *Trogosus* rather more than half the size of *T. castoridens*, which may be named *T. vetulus*.

A femur of *Palæosyops paludosus*, in the collection, exhibits the third trochanter, characteristic of the unequal-toed pachyderms. The astragalus of this animal almost repeats that of the living Tapirs.

Among the remains of Dr. Corson's collection, there is the greater part of the lower jaw of a large crocodile, but too much broken to attempt to give an opinion in regard to its specific character, until it is in some degree mended or restored.

AUGUST 15.

The President, Dr. RUSCHENBERGER, in the chair.

Eight members present.

AUGUST 22.

The President, Dr. RUSCHENBERGER, in the chair.

Nine members present.

AUGUST 29.

The President, Dr. RUSCHENBERGER, in the chair.

Fourteen members present.

Notice of some Extinct Rodents.—Prof. LEIDY remarked that Dr. J. Van A. Carter had recently sent to him some remains of rodents discovered in the tertiary deposits near Fort Bridger, Wyoming. Prof. Marsh has already indicated some remains of the same order, obtained from the same locality, which he has referred to a genus under the name of *Sciuravus*. The characters given are insufficient to determine positively whether the remains I have the opportunity of examining pertain to the same genus, though, from the greater size of the animals they indicate, they clearly belong to different species.

The remains appear to have belonged to a peculiar genus of the *Sciurine* family apparently allied to *Arctomys*.

The lower jaw is short and deep compared with that of most living rodents, apparently from a shortening of the bone in advance of the position of the molars. To compensate for this reduction in length, and give room for the incisors, they not only extend beneath all the molars, but also above them posteriorly and externally. Prof. Marsh states that in *Sciuravus* "the incisor extends below the entire molar series." The hiatus in advance of the molars presents an acute edge nearly on a level with the alveolar border, and does not form a deep notch as usual in living rodents. The masseteric fossa does not extend so far forward as usual in most living rodents, except the hares, only reaching below the position of the penultimate molar, where it is bounded by a prominent rectangular ridge, as in the Maryland marmot. The principal mental foramen is situated immediately in advance of the position of the first molar. The symphysis at its lower part apparently extended below the first part of the molar series.

The number of molars is the same as in the squirrels and marmots. They are of nearly uniform size, but are proportionately narrower than in the animals just mentioned, that is, the fore-and-aft diameter exceeds the transverse, which is usually the reverse

[November 21,